

16805 U.S. PTO
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UTILITY PATENT APPLICATION TRANSMITTAL <small>(Only for new nonprovisional applications under 37 CFR 1.53(b))</small>	Attorney Docket No.	62004-1851
	First Inventor	Mule, et al.
	Title	BACKPLANE, PRINTED WIRING BOARD, AND/OR MULTI-CHIP MODULE-LEVEL OPTICAL INTERCONNECT LAYER HAVING EMBEDDED AIR-GAP TECHNOLOGIES AND METHODS OF FABRICATION
Express Mail Label No.		EL 993859156 US

APPLICATION ELEMENTS <small>See MPEP Chapter 600 concerning utility patent application contents</small>		ADDRESS TO: <small>Mail Stop Patent Application Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450</small>	
1.	<input checked="" type="checkbox"/> Fee Transmittal Form (e.g., PTO/SB/17) <small>(Submit an original, and a duplicate for fee processing)</small>	7.	<input type="checkbox"/> CD-ROM or CD-R in duplicate, large table or Computer Program (Appendix)
2.	<input type="checkbox"/> Applicant claims small entity status. See CFR 1.27	8.	Nucleotide and/or Amino Acid Sequence Submission <small>(if applicable, all necessary)</small>
3.	<input checked="" type="checkbox"/> Specification <small>(preferred arrangement set forth below)</small> [Total Pages 28]	a.	<input type="checkbox"/> Computer Readable Copy (CRF)
	<ul style="list-style-type: none">- Descriptive title of the invention- Cross Reference to Related Applications- Statement Regarding Fed. Sponsored R&D- Reference to sequence listing, a table, or a computer program listing appendix- Background of the Invention- Brief Summary of the Invention- Brief Description of the Drawings (if filed)- Detailed Description- Claim(s)- Abstract of the Disclosure	b.	Specification Sequence Listing on: <ul style="list-style-type: none">i. <input type="checkbox"/> CD-ROM or CD-R (2 copies); orii. <input type="checkbox"/> Paper
4.	<input checked="" type="checkbox"/> Drawing(s) (35 USC 113) [Total Sheets 10]	c.	<input type="checkbox"/> Statements verifying identity of above copies
5.	Oath or Declaration [Total Pages 4] <ul style="list-style-type: none">a. <input type="checkbox"/> Newly Executed (original or copy)b. <input checked="" type="checkbox"/> Copy from a prior application (37 CFR §1.63(d)) <small>(for continuation/divisional with Box 18 completed)</small>i. <input type="checkbox"/> DELETION OF INVENTOR(S) <small>Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).</small>	ACCOMPANYING APPLICATION PARTS	
6.	<input type="checkbox"/> Application Data Sheet. See 37 CFR 1.76	9.	<input checked="" type="checkbox"/> Assignment Papers (cover sheet & Documents(s))
		10.	<input type="checkbox"/> 37 CFR 3.73(b) Statement <input type="checkbox"/> Power of Attorney <small>(when there is an assignee)</small>
		11.	<input type="checkbox"/> English Translation Document (if applicable)
		12.	<input checked="" type="checkbox"/> Information Disclosure Statement (IDS)/PTO-1449 68 Copies of IDS Citations
		13.	<input type="checkbox"/> Preliminary Amendment
		14.	<input checked="" type="checkbox"/> Return Receipt Postcard (MPEP 503) <small>(Should be specifically itemized)</small>
		15.	<input type="checkbox"/> Certified Copy of Priority Document(s) <small>(if foreign priority is claimed)</small>
		16.	<input type="checkbox"/> Nonpublication Request under 35 U.S.C. 122(b)(2)(B)(i). <small>Applicant must attach form PTO/SB/35 or its equivalent.</small>
		17.	<input type="checkbox"/> Other:

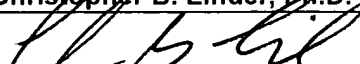
18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment, or in an Application Data Sheet under 37 CFR 1.76:

☒ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No: 10/135,314.

Prior application information: Examiner Phan T. H. Palmer

Group / Art Unit: 2874

For CONTINUATION OR DIVISIONAL APPS only: the entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. This incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

18. CORRESPONDENCE ADDRESS			
<input checked="" type="checkbox"/> Customer Number:	24504		OR <input type="checkbox"/> Correspondence address below:
NAME	Christopher B. Linder, Ph.D. Thomas, Kayden, Horstemeyer & Risley, L.L.P.		
ADDRESS	100 Galleria Parkway Suite 1750		
CITY	Atlanta	STATE	Georgia
COUNTRY	U.S.A.	TELEPHONE	770-933-9500
		ZIP CODE	30339-5948
		FAX	770-951-0933
Name (Print/Type)	Christopher B. Linder, Ph.D.	Registration No. (Attorney/Agent)	47,751
Signature		Date	12/11/03

**FEE TRANSMITTAL
for FY 2004**

Effective 10/01/2003. Patent fees are subject to annual revisions.

☐ Applicant claims small entity status. See 37 CFR 1.27TOTAL AMOUNT OF PAYMENT (\$)**896.00****Complete If Known**

Application Number	To be assigned
Filing Date	December 11, 2003 (4/29/02 Parent)
First Named Inventor	Mule, et al.
Examiner Name	Phan T.H. Palmer (Parent)
Group / Art Unit	2874 (Parent)
Attorney Docket No.	62004-1851

METHOD OF PAYMENT (check all that apply)
☐ Check ☒ Credit Card ☐ Money Order ☐ Other ☐ None
☒ Deposit Account

Deposit Account Number

20-0778

Deposit Account Name

Thomas, Kayden, Horstemeyer Risley, L.L.P.

The Commissioner is authorized to: (check all that apply)

☐ Charge fee(s) indicated below ☒ Credit any overpayments
☒ Charge any additional fee(s) during the pendency of this application
☐ Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account
FEE CALCULATION**1. BASIC FILING FEE**

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
1001	770	2001	385	Utility Filing Fee	770.00
1002	340	2002	170	Design Filing Fee	
1003	530	2003	265	Plant Filing Fee	
1004	770	2004	385	Reissue Filing Fee	
1005	160	2005	80	Provisional Filing Fee	
SUBTOTAL (1)					(\$770.00)

2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

	Extra Claims	Fee From Below	Fee Paid
Total Claims	19	- 20** = 0	X 18.00 = 0
Independent Claims	4	- 3** = 1	X 86.00 = 86.00
Multiple Dependent			145.00 = 0

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
1202	18	2202	9	Claims in excess of 20	
1201	86	2201	43	Independent claims in excess of 3	
1203	290	2203	145	Multiple dependent claim, if not paid	
1204	86	2204	43	**Reissue independent claims over original patent	
1205	18	2205	9	**Reissue claims in excess of 20 and over original patent	
SUBTOTAL (2)					(\$86.00)

**or number previously paid, if greater; For Reissues, see above

FEES CALCULATION (continued)**3. ADDITIONAL FEES**

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
1051	130	2051	65	Surcharge-late filing fee or oath	
1052	50	2052	25	Surcharge-late provisional filing fee or cover sheet	
1053	130	1053	130	Non-English specification	
1812	2,520	1812	2,520	For filing a request for ex parte reexamination	
1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action	
1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action	
1251	110	2251	55	Extension for reply within first month	
1252	420	2252	210	Extension for reply within second month	
1253	950	2253	475	Extension for reply within third month	
1254	1,480	2254	740	Extension for reply within fourth month	
1255	2,010	2255	1,005	Extension for reply within fifth month	
1401	330	2401	165	Notice of Appeal	
1402	330	2402	165	Filing a brief in support of an appeal	
1403	290	2403	145	Request for oral hearing	
1451	1,510	1451	1,510	Petition to institute a public use proceeding	
1452	110	2452	55	Petition to revive-unavoidable	
1453	1,330	2453	655	Petition to revive-unintentional	
1501	1,330	2501	665	Utility issue fee (or reissue)	
1502	480	2502	240	Design issue fee	
1503	640	2503	320	Plant issue fee	
1460	130	1460	130	Petitions to the Commissioner	
1807	50	1807	50	Processing fee for provisional application	
1806	180	1806	180	Submission of Information Disclosure Stmt	
8021	40	8021	40	Recording each patent assignment per property (times number of properties)	40.00
1809	770	2809	385	Filing a submission after final rejection (37 CFR § 1.129(a))	
1810	770	2810	385	For each add. invention to be examined (37 CFR 1.129(b))	
1801	770	2801	385	Request for Continued Examination (RCE)	
1802	900	1802	900	Request for expedited exam. of a design application	
Other fee (specify)					
SUBTOTAL (3)					(\$40.00)

*Reduced by Basic Filing Fee Paid

SUBMITTED BYTyped or Printed Name
Signature**Christopher B. Linder, Ph.D.**Registration No. **47,751****Complete (if applicable)**

Telephone Number

770-933-9500

Date

12/11/03**WARNING: Information on this form may become public. Credit Card information should not be included on this form. Provide credit card information and authorization on PTO-2038**

This collection of information is required by 37 CFR 1.17 and 1.27. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 37 USC 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: **Mule, et al.**

For: **BACKPLANE, PRINTED WIRING BOARD, AND/OR MULTI-CHIP MODULE-
LEVEL OPTICAL INTERCONNECT LAYER HAVING EMBEDDED AIR-GAP
TECHNOLOGIES AND METHODS OF FABRICATION**

CERTIFICATE OF EXPRESS MAIL

Mail Stop Patent Application
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Sir:

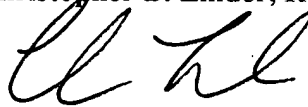
Enclosed for filing in the above case are the following documents:

Return Postcard
Utility Patent Application Transmittal Page
Fee Transmittal Page
Utility Patent Application Consisting Of:
22 Pages of Specification
6 Pages of Claims (Claims 1-1)
1 Page of Abstract
10 Pages of Formal Drawings (Fig(s). 1A-9I)
Preliminary Remarks
Declaration (copy, executed)
Assignment & Recordation Cover Sheet
Information Disclosure Statement, Form PTO 1449 and 68 References
Credit Card Authorization in the Amount of \$896.00

Further, the Commissioner is authorized to charge Deposit Account No. 20-0778 for any additional fees required. The Commissioner is requested to credit any excess fee paid to Deposit Account No. 20-0778.

Respectfully submitted,

Christopher B. Linder, Reg. No. 47,751



**THOMAS, KAYDEN, HORSTEMEYER
& RISLEY, L.L.P.**

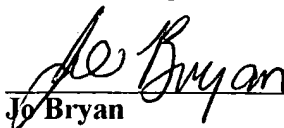
100 Galleria Parkway, N.W.
Suite 1750
Atlanta, Georgia 30339-5948

Our Docket No: **62004-1851**

I hereby certify that all correspondence listed above are being deposited for delivery to the above addressee, with the United States Postal Service "**EXPRESS MAIL POST OFFICE TO ADDRESSEE**" service under 37 CFR §1.10 on the date indicated below:

The envelope has been given U.S. Postal Service "Express Mail Post Office To Addressee" Package # **EL 993859156 US**.

Date: Dec. 11, 2003


Jo Bryan